



October 17, 2016

Michelle Kaysen
USEPA Region 5, Mail Code LU-9J
77 West Jackson Boulevard
Chicago, Illinois 60604

RE: Third Quarter 2016 Progress Report, Hartford Petroleum Release Site, Hartford, Illinois

Dear Ms. Kaysen,

212 Environmental Consulting, LLC (212 Environmental) is submitting this quarterly report summarizing the progress and status of activities performed at the Hartford Petroleum Release Site (Hartford Site) on behalf of Apex Oil Company, Inc. (Apex) for the time period from July 1, 2016 to September 30, 2016.

1. The following deliverables were submitted by Apex during the third quarter 2016:

- The draft *Soil Vapor Extraction System Effectiveness Zone 6 Optimization Report, Hartford Petroleum Release Site, Hartford, Illinois* was submitted to the United States Environmental Protection Agency (USEPA) and Illinois EPA on July 1, 2016 via standard mail and electronic file sharing.
- The *Second Quarter 2016 Progress Report* was submitted to the USEPA and the Illinois EPA on July 8, 2016 via email.
- The draft *Second Quarter 2016 Sentinel Well Monitoring Summary Report* was submitted to the USEPA and the Illinois Environmental Protection Agency (Illinois EPA) on July 15, 2016 via electronic file sharing.
- The final *Dissolved Phase Investigation Report, Hartford Petroleum Release Site, Hartford, Illinois*, incorporating comments from the USEPA and Illinois EPA, was submitted on July 15, 2016 via standard mail and electronic file sharing.
- The revised *Second Quarter 2016 Sentinel Well Monitoring Summary Report*, incorporating comments from the USEPA and Illinois EPA, was submitted on July 22, 2016 via standard mail and electronic file sharing.
- The draft *Summary of Lines of Evidence Indicating an Alternate Source of Petroleum Hydrocarbons beneath Soil Vapor Extraction System Effectiveness Zone 1, Hartford Petroleum Release Site, Hartford, Illinois* was submitted to the USEPA and Illinois EPA on August 25, 2016 via standard mail and electronic file sharing.
- The revised *Soil Vapor Extraction System Effectiveness Zone 6 Optimization Report, Hartford Petroleum Release Site, Hartford, Illinois* and response to the USEPA and Illinois EPA



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comments was submitted on August 26, 2016 via standard mail and electronic file sharing.

- The draft *Semiannual Soil Vapor Extraction System Operations, Maintenance, and Monitoring Report, October 2015 through March 2016, Hartford Petroleum Release Site, Hartford, Illinois* was submitted to the USEPA and Illinois EPA on September 9, 2016 via standard mail and electronic file sharing.
2. The following requests and notifications pertaining to activities at the Hartford Site were submitted by Apex during the third quarter 2016:
- The USEPA and Illinois EPA were provided notification of initiation of river stage triggered monitoring event EBMP-31 and implementation of in-home event based monitoring activities on August 4, 2016.
 - The USEPA and Illinois EPA were provided daily notifications regarding field activities and monitoring results between August 6 and 12, 2016 during river stage triggered monitoring event EBMP-31.
 - The USEPA and Illinois EPA were provided notification of initiation of river stage triggered monitoring event EBMP-32 and a request to modify the scope of in-home monitoring activities associated with the event on September 9, 2016. The USEPA provided approval of the modified scope on September 13, 2016 via email.
 - The USEPA and Illinois EPA were provided notifications regarding field activities and monitoring results on September 15 and September 19, 2016 during river stage triggered monitoring event EBMP-32.
3. Apex participated in the following meetings and teleconferences during the third quarter 2016:
- Teleconference with the USEPA, Illinois EPA, and TetraTech (USEPA technical review contactor) to preview the draft *Soil Vapor Extraction System Effectiveness Zone 6 Optimization Report* was conducted on July 6, 2016.
 - Teleconference with the USEPA to discuss USEPA Administrative Records and Hartford Public Library document repository was conducted on July 13, 2016.
 - Teleconference with the USEPA, Illinois EPA, and TetraTech to discuss comments and revisions to the draft *Soil Vapor Extraction System Effectiveness Zone 6 Optimization Report* was conducted on August 12, 2016.
 - Teleconference with the USEPA, Illinois EPA, and TetraTech to discuss (i) on-going operations, monitoring, and maintenance activities, (ii) initial Agency comments regarding several submittals including the draft *Summary of Lines of Evidence Indicating an Alternate Source of Petroleum Hydrocarbons beneath Soil Vapor Extraction System Effectiveness Zone 1* and the revised *Soil Vapor Extraction System Effectiveness Zone 6 Optimization Report*, and (iii) updates to the compliance calendar was conducted on September 13, 2016.
 - Teleconference with the USEPA to discuss updates to the compliance calendar, scheduled



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meetings, and on-going priorities for the Hartford Site was conducted on September 30, 2016.

4. Apex completed the following in-home effectiveness monitoring activities:

- Weekly in-home effectiveness monitoring was performed within nine structures at the Hartford Site during the third quarter 2016.
- Quarterly and river stage triggered in-home effectiveness monitoring associated with EBMP-31 was performed in 27 structures at the Hartford Site between August 3 and August 12, 2016.
- In-home effectiveness monitoring was conducted within eleven structures at the Hartford Site in response to river stage triggered monitoring event (EBMP-32) on September 14 and September 16, 2016. The reduced scope of monitoring activities was approved by the USEPA on September 13, 2016.

5. Apex completed the following dissolved phase investigation activities:

- Quarterly manual fluid level gauging within 377 groundwater monitoring wells and multipurpose monitoring points was completed between July 11 and 14, 2016.

6. Apex completed the following operations, maintenance, and monitoring (OMM) activities with soil vapor extraction (SVE) system during the third quarter 2016:

- Routine monitoring within vapor collection system components was conducted during the third quarter 2016 including: (1) fluid level gauging; (2) measuring vacuum, air flow, and temperature; and (3) screening total organic vapor concentrations within operating SVE wells.
- Routine operations within the vapor collection system components was conducted during the third quarter 2016 including adjustments to stingers and valve positions within individual wells, as well as sweeping of the horizontal transmission lines to remove accumulated groundwater.
- Non-routine maintenance of the vapor collection system consisting of silt removal from 27 operating extraction wells in accordance with the *Final Vapor Collection System Operation, Maintenance, and Monitoring Plan* (Trihydro 2015) was conducted between September 26 and 27, 2016.
- Effectiveness monitoring for the vapor collection system was conducted within 121 nested vapor monitoring probes and multipurpose monitoring points between August 10 and 14, 2016.
- Routine OMM of the thermal treatment system components was performed throughout the third quarter 2016.
- Non-routine maintenance of the thermal treatment system consisting of silt removal from



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main header, underground vapor liquid separator, and the above ground vapor liquid separator was performed between August 11 and 24, 2016.

7. Activities planned during the fourth quarter 2016 at the Harford Site:

- Conduct routine OMM of the vapor collection and thermal treatment components of the SVE system in accordance with the approved *Vapor Collection System Operation, Maintenance, and Monitoring Plan* (Trihydro 2015) and *HSVE Monitoring and Maintenance Manual* (URS 2014).
- Conduct quarterly effectiveness monitoring within the nested vapor monitoring probes and multipurpose monitoring points in accordance with the approved *Effectiveness Monitoring Plan* (URS 2014) in November 2016.
- Conduct quarterly in-home effectiveness monitoring in November 2016 in accordance with the *Final Interim In-Home Effectiveness Monitoring Plan* (Trihydro 2014).
- Continue weekly in-home effectiveness monitoring within nine structures in accordance with the *Final Interim In-Home Effectiveness Monitoring Plan* (Trihydro 2014).
- Conduct river stage triggered monitoring in accordance with the triggers established within the *Final Interim In-Home Effectiveness Monitoring Plan* (Trihydro 2014).
- Continue dissolved phase investigation activities in accordance with the *Final Dissolved Phase Investigation Work Plan* (Trihydro 2013) including: (1) quarterly fluid level gauging, (2) groundwater sampling, and (3) data reduction, analysis, and reporting.
- Conduct semiannual groundwater monitoring of the five sentinel wells located south of the Hartford Site in December 2016.
- Participate in routine teleconferences and meetings with the USEPA and Illinois EPA.

We appreciate your continued engagement with this project. If you have any questions or require any additional information, please contact me at (513) 430-1766.

Sincerely,

Paul Michalski, P.G.
Senior Hydrogeologist

cc: James F. Sanders, Apex Oil Company, Inc.
Tom Miller, Illinois Environmental Protection Agency